

Amendment to the Claims

Please amend the Claims as follows.

1.(Currently Amended) A stream computer, said stream computer comprising:
a plurality of interconnected functional units, each of said interconnected func-
tional units operating independently, each of said functional units of said plurality
of interconnected functional units connected to one or more functional units of said
5 plurality of interconnected functional units using one or more programmable switches,
said programmable switches responsive to commands concurrent with a data stream,
each of said functional units responsive to said data stream containing data to be
operated on by one or more of said functional units and to tokens within said data
stream, said tokens identifying how said functional units are to operate on said data
10 stream, said functional units operating concurrently in response to said data stream;
said programmable switches programmably reconfiguring said plurality of in-
terconnected functional units to direct said data stream among said interconnected
functional units in accordance with said commands;

digital logic cooperatively associated with one of said functional units for com-
15 paring said data stream presented to said one of said functional units with a debug
stream;

reporting logic associated with said digital logic for reporting the occurrence of
matches between said data stream and said debug stream ,

wherein said digital logic extracts similarities between said data stream and
20 said debug stream to generate a viewpoint.

2. Canceled

3.(Previously presented) A stream computer as described in claim 1 wherein
said digital logic generates said viewpoint without interrupting said data stream.

4.(Previously Presented) A stream computer as described in claim 1 wherein
said digital logic extracts similarities between said data stream and said debug stream
to induce a breakpoint.

5.(Previously Presented) A stream computer as described in claim 4 wherein said digital logic extracts similarities between said data stream and said debug stream to induce said breakpoint in response to a breakpoint number arriving at said digital logic.

6.(Previously Presented) A stream computer as described in claim 4 wherein said digital logic generates said breakpoint and interrupts said data stream passing through said digital logic.

7.(Previously Presented) A stream computer as described in claim 4 wherein said digital logic generates said breakpoint and allows said data stream to pass through.

8.(Previously Presented) A stream computer as described in claim 1 wherein said at least one of said plurality of interconnected functional units, said digital logic, and said reporting logic are integrated on a single substrate.

9.(Previously Presented) A stream computer as described in claim 1 wherein said reporting logic are compatible with a graphical user interface, said graphical user interface identifying said functional units, and inputs and outputs of said functional units.

10.(Previously Presented) A stream computer as described in claim 1 wherein one or more of said functional units are reconfigured to become part of said digital logic.

11. (Previously Presented) A stream computer as described in claim 1 wherein said digital logic further comprises arithmetic logic units (ALU) and memory functions, said functions obtained by allocating some functional units to perform said ALU and memory functions.

12.(Currently amended) A stream computer, said stream computer comprising: a first plurality of interconnected functional units responsive to a data stream

containing data and tokens to be operated on by one or more of said first plurality of interconnected functional units , each of said interconnected functional units computing independently, each of said functional units of said first plurality of interconnected functional units connected to one or more functional units of said first plurality of interconnected functional units using one or more programmable switches, said programmable switches responsive to commands concurrent with said data stream,

said programmable switches programmably reconfiguring said plurality of interconnected functional units to direct said data stream among said interconnected functional units in accordance with said commands;

said tokens identifying how each interconnected functional unit of said first plurality of interconnected functional units are to operate on said data stream, said first plurality of interconnected functional units operating concurrently in response to said data stream;

a second plurality of interconnected functional units allocated for concurrently comparing said data stream, and internal streams within said stream computer, with a debug stream to generate debug signals;

reporting logic responsive to said debug signals for reporting the occurrence of matches between said data stream and said debug stream compatible with human perception,

wherein said second plurality of interconnected functional units extracts similarities between said data stream and said debug stream to generate a viewpoint.

13. Canceled

14.(Previously presented) A stream computer as described in claim 12 wherein said second plurality of interconnected functional units generates said viewpoint without interrupting said data stream.

15.(Previously presented) A stream computer as described in claim 12 wherein said second plurality of interconnected functional units extracts similarities between said data stream and said debug stream to induce a breakpoint.

16.(Previously Presented) A stream computer as described in claim 15 wherein

said second plurality of interconnected functional units extracts similarities between said data stream and said debug stream to induce said breakpoint in response to a breakpoint number.

17.(Previously Presented) A stream computer as described in claim 15 wherein said second plurality of interconnected functional units generates said breakpoint and interrupts said data stream.

18.(Previously Presented) A stream computer as described in claim 15 wherein said second plurality of interconnected functional units generates said breakpoint and allows said data stream to pass through.

19.(Previously Presented) A stream computer as described in claim 12 wherein at least one of said plurality of interconnected functional units, and said reporting logic are integrated on a single substrate.

20.(Previously Presented) A stream computer as described in claim 12 wherein said reporting logic is compatible with a graphical user interface, said graphical user interface identifying said functional units, and inputs and outputs of said functional units.

21.(Currently Amended) A method for operating a stream computer, said method comprising the steps of:

programming a first plurality of interconnected functional units forming said stream computer to compute in accordance with data and tokens contained in a data stream, said tokens identifying how said functional units are to operate on said data stream, said first plurality of interconnected functional units computing concurrently in response to said data stream,

each of said functional units of said plurality of interconnected functional units connected to one or more functional units of said plurality of interconnected functional units using one or more programmable switches, each of said interconnected functional units computing independently, said programmable switches responsive to commands concurrent with said data stream;

said programmable switches programmably reconfiguring said plurality of interconnected functional units to direct said data stream among said interconnected functional units in accordance with said commands;

programming a second plurality of interconnected functional units forming said stream computer to compare said data stream, and internal streams within said stream computer, with a debug stream;

reporting the occurrence of matches between said data stream and said debug stream using symbols compatible with human perception ; and

extracting similarities between said data stream and said debug stream to generate a viewpoint, using said second plurality of interconnected functional units.

22. Canceled

23. (Previously Presented) A method as described in claim 21 wherein said step of extracting similarities by said second plurality of interconnected functional units generates said viewpoint without interrupting said data stream.

24.(Previously Presented) A method as described in claim 21 wherein said step of extracting similarities by said second plurality of interconnected functional units between said data stream and said debug stream induces a breakpoint.

25.(Previously Presented) A method as described in claim 24 wherein said step of extracting similarities by said second plurality of interconnected functional units also induces said breakpoint in response to a breakpoint number.

26.(Previously Presented) A method as described in claim 24 wherein inducing said breakpoint interrupts said data stream.

27.(Previously Presented) A method as described in claim 24 wherein inducing said breakpoint allows said data stream to pass through.

28. (Previously Presented) A method as described in claim 21 wherein said reporting step generates information compatible with a graphical user interface, said

graphical user interface identifying said functional units, and inputs and outputs of said functional units.